WHAT IS CLAIMED IS:

1. A method for measuring a propagation delay value of a frame transmitted by a UE (User Equipment) to a Node B in a TDD (Time Division Duplexing) mobile communication system including a frame divided into two sub-frames, each of the sub-frames having a plurality of time slots and also having a downlink pilot time slot and an uplink pilot time slot, both intervening between a first time slot and a second time slot of the plurality of time slots, the system also including the Node B for transmitting the frame fixed to a time axis, and the UE for transmitting a propagation-delayed frame in response to the frame received from the Node B, the method comprising the steps of:

acquiring synchronization with the Node B based on a downlink pilot channel signal transmitted in a period of the downlink pilot time slot, and determining an estimated round trip delay value T1 by comparing transmission power of a physical common channel signal in the first time slot with reception power of the physical common channel signal;

transmitting an uplink pilot channel signal by applying the estimated round trip delay value T1 to a desired transmission point of the uplink pilot channel signal;

receiving a transmission point correcting value T2 through a forward physical access channel (FPACH) signal transmitted from the Node B in a period of one downlink time slot among the time slots; and

transmitting a physical random access channel (PRACH) message with the estimated round trip delay value T1 at a transmission point determined based on the transmission point correcting value T2 and the estimated round trip delay value T1, so that the PRACH message is received at the Node B at a start point of a period of one uplink time slot among the time slots.

2. The method as claimed in claim 1, wherein the transmission power of the physical common channel signal is determined based on system

information provided through a broadcast channel in the physical common channel signal.

3. The method as claimed in claim 1, wherein the estimated round trip delay value T1 is determined based on a path loss determined by comparing the transmission power of the physical common channel signal with the reception power of the physical common channel signal.

4. The method as claimed in claim 1, wherein the desired transmission point of the uplink pilot channel signal is determined based on the acquired synchronization.

5. The method as claimed in claim 1, wherein the transmission point correcting value T2 is determined based on an offset between an arrival point of the uplink pilot time slot and a desired arrival point of the uplink pilot time slot.

6. The method as claimed in claim 5, wherein the desired arrival point is identical to a start point of a period of the uplink pilot time slot.

7. The method as claimed in claim 6, wherein the transmission point correcting value T2 is determined within a range of –96 chips to 32 chips.

8. The method as claimed in claim 7, wherein the –96 chips are determined considering a guard period existing between the downlink pilot time slot and the uplink pilot time slot.

9. The method as claimed in claim 1, wherein the transmission point of the PRACH message is determined by a sum of the estimated round trip delay value T1 and the transmission point correcting value T2.

10. A method for measuring a propagation delay value of a frame transmitted by a Node B to a UE (User Equipment) in a TDD (Time Division Duplexing) mobile communication system including a frame divided into two sub-frames, each of the sub-frames having a plurality of downlink time slots, a plurality of uplink time slots, a downlink pilot time slot and an uplink pilot time slot, and further including the Node B for transmitting a physical common channel signal in a period of a first time slot of the sub-frame, and the UE for calculating an estimated round trip delay value T1 based on a path loss of the physical common channel signal and transmitting the uplink pilot time slot by applying the calculated round trip delay value T1, the method comprising the steps of:

determining a transmission point correcting value T2 based on an offset between an arrival point of an uplink pilot channel signal and a desired arrival point of the uplink pilot channel signal in the uplink pilot time slot period;

including the transmission point correcting value T2 in a forward physical access channel (FPACH) signal, and transmitting the PFACH signal to the UE in a period of one downlink time slot among the downlink time slots;

receiving a physical random access channel (PRACH) message with the estimated round trip delay value T1, transmitted from the UE at a transmission point determined based on the transmission point correcting value T2 and the estimated round trip delay value T1, in a period of one uplink time slot among the uplink time slots; and

transmitting the estimated round trip delay value T1 and the transmission point correcting value T2 included in the PRACH message to a radio network controller (RNC) to which the UE belongs, along with an RACH signaling message, so that the RNC determines a round trip delay between the Node B and the UE.

11. The method as claimed in claim 10, wherein the desired arrival point is identical to a start point of a period of the uplink pilot time slot.

12. The method as claimed in claim 10, wherein the transmission point correcting value T2 is determined within a range of –96 chips to 32 chips.

13. The method as claimed in claim 12, wherein the –96 chips are determined considering a guard period existing between the downlink pilot time slot and the uplink pilot time slot.

14. The method as claimed in claim 10, wherein the round trip delay value is determined by a sum of the estimated round trip delay value T1 and the transmission point correcting value T2.

15. A method for measuring a propagation delay value of a frame exchanged between a UE (User Equipment) and a Node B in a TDD (Time Division Duplexing) mobile communication system including a frame divided into two sub-frames, each of the sub-frames having a plurality of downlink time slots, a plurality of uplink time slots, a downlink pilot time slot and an uplink pilot time slot, and further including the Node B for transmitting a physical common channel signal in a period of a first time slot of the sub-frame, and the UE for calculating an estimated round trip delay value T1 based on a path loss of the physical common channel signal and transmitting the uplink pilot time slot by applying the calculated round trip delay value T1, the method comprising the steps of:

transmitting an uplink pilot channel signal from UE to the Node B at a transmission point determined by applying the estimated round trip delay value T1 to a desired transmission point of the uplink pilot channel signal;

determining by the Node B a transmission point correcting value T2 based on an offset between an arrival point of the uplink pilot channel signal and a desired arrival point of the uplink pilot channel signal;

transmitting the determined transmission point connecting value T2 from

the Node B to the UE along with a forward physical access channel (FPACH) signal in a given downlink time slot period;

transmitting a physical random access channel (PRACH) message with the estimated round trip delay value T1 from the UE to the Node B at a transmission point determined based on the transmission point correcting value T2 and the estimated round trip delay value T1 received through the FPACH signal;

receiving by the Node B the PRACH message at a start point of a given uplink time slot period; and

transmitting the estimated round trip delay value T1 and the transmission point correcting value T2 included in the received PRACH message from the Node B to a radio network controller (RNC) to which the UE belongs, along with a random access channel (RACH) signaling message, so that the RNC determines a round trip delay between the Node B and the UE.

16. The method as claimed in claim 15, wherein the desired transmission point of the uplink pilot channel signal is determined based on acquired synchronization.

17. The method as claimed in claim 15, wherein the desired arrival point of the uplink pilot channel signal is identical to a start point of a period of the uplink pilot time slot.

18. The method as claimed in claim 15, wherein the transmission point correcting value T2 is determined within a range of –96 chips to 32 chips.

19. The method as claimed in claim 18, wherein the –96 chips are determined considering a guard period existing between the downlink pilot time slot and the uplink pilot time slot.

20. The method as claimed in claim 15, wherein a transmission point of the physical random access channel (PRACH) message is determined by a sum of the estimated round trip delay value T1 and the transmission point correcting value T2.

21. An apparatus for measuring a propagation delay value of a frame exchanged between a UE (User Equipment) and a Node B in a TDD (Time Division Duplexing) mobile communication system including a frame divided into two sub-frames, each of the sub-frames having a plurality of downlink time slots, a plurality of uplink time slots, a downlink pilot time slot and an uplink pilot time slot, and further including the Node B for transmitting a physical common channel signal in a period of a first time slot of the sub-frame, and the UE for calculating an estimated round trip delay value T1 based on a path loss of the physical common channel signal and transmitting the uplink pilot time slot by applying the calculated round trip delay value T1, the apparatus comprising:

the UE for transmitting an uplink pilot channel signal at a transmission point determined by applying the estimated round trip delay value T1 to a desired transmission point of the uplink pilot channel signal, and transmitting a physical random access channel (PRACH) message with the estimated round trip value T1 at a transmission point determined based on the transmission point correcting value T2 and the estimated round trip delay value T1 received through a forward physical access channel (FPACH) signal;

the Node B for determining the transmission point correcting value T2 based on an offset between an arrival point of the uplink pilot channel signal and a desired arrival point of the uplink pilot channel signal, transmitting the determined transmission point correcting value T2 along with the FPACH signal in a given downlink time slot period, and transmitting the estimated round trip delay value T1 and the transmission point correcting value T2 included in the PRACH message received at a start point of a given uplink time slot period to a radio network controller (RNC) along with an RACH signaling frame; and

the RNC for receiving the RACH signaling frame and determining a round trip delay between the UE and the Node B based on the estimated round trip delay value T1 and the transmission point correcting value T2 included in the received RACH signaling frame.

22. The apparatus as claimed in claim 21, wherein the desired transmission point of the uplink pilot channel signal is determined based on acquired synchronization.

23. The apparatus as claimed in claim 21, wherein the desired arrival point of the uplink pilot channel signal is identical to a start point of a period of the uplink pilot time slot.

24. The apparatus as claimed in claim 21, wherein the transmission point correcting value T2 is determined within a range of –96 chips to 32 chips.

25. The apparatus as claimed in claim 24, wherein the –96 chips are determined considering a guard period existing between the downlink pilot time slot and the uplink pilot time slot.

26. The apparatus as claimed in claim 21, wherein a transmission point of the physical random access channel (PRACH) message is determined by a sum of the estimated round trip delay value T1 and the transmission point correcting value T2.